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PHOTOGRAPHIC INTERPRETATION REPORT

NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER

RADOST PROBABLE SIGINT FACILITY

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GROUP 1: EXCLUDED FROM AUTOMATIC DOWNGRADING AND DECLASSIFICATION



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installation or activity in Radost Proba	NAME able SIGINT :	Facility			- <u> </u>	COUNTRY UR	,
UTM COORDINATES NA	GEOGRAPHIC COORDIN			BE NUMBER None	None None		
SAC . USATC	, Series 200	, Sheet 0202-6	, scale 1:				
			NA NPIC PROJECT				
			25086	53			

- 1. The Radost Probable SIGINT Facility (Figure 1) is on the west side of the Mirnaya Army Barracks ALl approximately 28 nautical miles (nm) northwest of Borzya, USSR, and 60 nm north of the Sino-Soviet border. Large-scale and small-scale photography through April 1970 indicate that this is a communications receiving/collection facility.
- 2. A search of available photography failed to locate a SIGINT-identified transmitting facility in the vicinity of Radost.

BASIC DESCRIPTION

3. The Radost Probable SIGINT Facility (Figure 2) contains a FIX 24 direction finding (DF) facility, five 2-2-2 high frequency (HF) fishbone antennas, nine horizontal dipole antennas, and a T-shaped control building. All the antennas and the FIX 24 facility appear operational. Details of antenna frequencies and azimuths are given in Table 1, which is keyed to Figure 2.

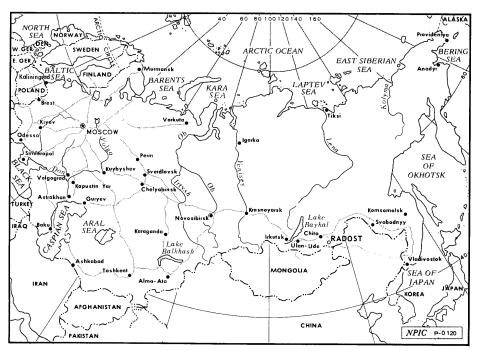


FIGURE 1. LOCATION MAP

- 1 -

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4. The five receiving fishbone antennas form an arc of approximately 100 degrees in width and are oriented toward China (inset, Figure 2). All feedlines for the five fishbone antennas and the nine horizontal dipole antennas terminate at the T-shaped control building, which indicates that the horizontal dipoles are also receiving antennas. None of the antennas at this facility have orientations within 15 degrees of Arsenev, USSR, or 25 degrees of Chita, USSR, which are possible correspondents of a SIGINT-identified transmitting facility in the Radost area.

5. Several possible support buildings south of the T-shaped control building have been constructed since June 1969. However, it cannot be determined if they are associated with the communications facility or with the barracks.

TABLE 1. DETAILS OF ANTENNAS AT THE RADOST PROBABLE SIGINT FACILITY

Item	Type	Soviet <u>Designator</u> *
. A	Horizontal dipole	VGD <u>30</u> d
В	Horizontal dipole	VGD 60a 22
С	Horizontal dipole	VGD 60d -
D	Horizontal dipole	VGD <u>30</u> d 20
E	Horizontal dipole	VGD 60d 24
F	Horizontal dipole	vgd <u>60</u> a 24
G	Horizontal dipole	VGD <u>30</u> d 13
. Н	Horizontal dipole	VGD <u>71</u> d 23
I	Horizontal dipole	VGD <u>71</u> d
J	Fishbone	BS $\frac{21}{8} + \frac{19}{4.5}$
K	Fishbone	BS <u>21 r 19</u> 8 4.5
, L .	Fishbone	BS $\frac{21}{8} + \frac{19}{4.5}$
М	Fishbone	BS 21 r 19 8 4.5
N	Fishbone	BS <u>21 r 19</u> 8 4.5
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 \text{*VGD} = \underbrace{\frac{1}{h}}_{\text{d}} \text{ where } 1 = \text{length of arm (meters)} \\ \text{h = height on antenna (meters)} \\ \text{d = diameter (meters)}   \text{BS} = \underbrace{\frac{n}{1}}_{\text{d}} \underbrace{\frac{r}{1}}_{\text{d}}_{\text{d}} \text{ where n = number of dipole elements} \\ \text{l = length of dipole arms (meters)} \\ \text{r = coupling impedance (ohms)} \\ \text{l}_{\text{d}} = \underbrace{\text{distance between dipole elements (meters)}}_{\text{H = height}}
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